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July 25, 2002

Mr. Rodney Struck  
Oregon Department of Environmental Quality  
2020 SW 4th Avenue, Suite 400  
Portland, Oregon 97201

**Subject: Terminal 1 South  
Response to Approval Comments on Removal Action Work Plan  
ECSI File No. 2042**

Dear Mr. Struck:

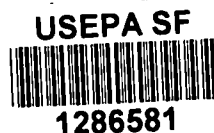
The Port of Portland (Port) has prepared the following responses to the Oregon Department of Environmental Quality (DEQ) comments on the Terminal 1 (T1) South Removal Action Work Plan, as presented in your letter dated June 26, 2002. The Port's response to DEQ's comments (repeated below) are summarized below.

1. Section 4.1. Page 7. Please be aware that the following laws may apply to this site:
  - National Historic Preservation Act of 1966, 16 USC 470 et seq.,
  - the Archeological Resources Protection Act, 16 USC 470aa et seq.,
  - the Native American Graves Protection and Repatriation Act of 1990, 25 USC 3001 et seq.,
  - Oregon Laws Protecting Indian Graves, ORS 97.740 et seq., or
  - Archeological Site Permit Requirements, ORS 358.905 et seq.

At DEQ cleanup sites, the Oregon laws are likely the most applicable, however federal laws regarding the protection of archeological resources may also apply. DEQ is committed to the principle that management of the upland sites be completed in compliance with applicable laws related to cultural resources.

**Response:** We understand that these laws may be applicable. Because all work will take place in historical fill, no significant archeological resources are expected. In addition, the many explorations completed on the site have not shown evidence of archeological resources. However, inspectors will observe for potential resources and the Port will notify the DEQ if observations suggest potential resources within the excavation.

2. Section 4.1. Page 7. Well Abandonment. Groundwater monitoring wells must be abandoned in accordance with Oregon Administrative Rules (OAR) Chapter 690



Division 240. Documentation of well abandonment must be provided to DEQ in addition to the Oregon Water Resources Department (WRD).

**Response:** The specifications for the project require a licensed well driller to conduct the abandonment. Documentation of the well abandonment will be included in the final report.

3. Section 4.4. Page 11. If selected excavated areas are not backfilled, pending site development, the Contractor should assure excavation walls are stabilized (e.g., sloping) prior to leaving the site.

**Response:** The specifications for the project call for backfilling of the excavations. If excavations are not completely backfilled, the sidewalls will be sloped to assure stability.

4. Section 4.5. Page 11. Site Security Measures. DEQ recommends that the Port develop a site security plan that includes frequent inspections of the temporary fencing and maintaining the fencing, as needed, pending site development.

**Response:** If excavations are not completely backfilled, the Port will develop a site security plan for fence inspection and maintenance.

5. Section 5.2/Figure 7/Table 3. Confirmation Samples. DEQ believes additional confirmation samples are needed in the following areas:

- Excavation Area 4. Confirmation samples should be also be collected from 0-3 feet bgs.
- Excavation Area 10. Confirmation samples should be also be collected from 0-3 feet bgs.
- Excavation Area 17/18. Confirmation samples should be also be collected from 0-3 feet and 3-15 feet bgs in the eastern most corner (near Warehouse No. 2) of the excavation.
- Excavation Area 17 (Boring B-92 Hot Spot). Confirmation samples should be also be collected from 0-3 feet and 3-15 feet bgs immediately northeast of the hot spot.

**Response:** The conceptual approach for preparing the confirmation sampling plan was based on the purpose of the excavation, presence of shoring, and the availability of existing data. There are three primary reasons for excavation for this site: excavate soil with PAHs above cleanup levels; excavate soil with TPH above cleanup levels; and excavate clean soil to access soil with TPH above cleanup levels. In general, confirmation sampling is proposed to address the purpose of the excavation being considered, except that, confirmation sampling is not proposed if it duplicates existing data or the presence of shoring prevents access to the soil. Therefore, in response to the above comment:

- Area 4. Samples were collected from 0-3 feet from borings B-69, B-70, and B-71. These samples were analyzed for TPH and PAHs with results below detection limits. Excavation in Area 4 extends northward beyond these points solely for the purpose of accessing deeper soils above the TPH cleanup level. Therefore, the data from B-69, B-70, and B-71 are the confirmation results for the Area 4 excavation and no further data from 0-3 feet is needed or proposed.
  - Area 10. Area 10 is analogous to Area 4. However, upon further review, the existing data to the southeast are limited. Therefore, two samples will be added to the southeast side of Area 10 in the 0-3 foot depth range. The new samples will be analyzed for TPH (see response to comment 6 below). A revised Figure 7 is attached.
  - Area 17/18 and Area 17 (Boring B-92 Hot Spot). The confirmation sampling scheme in this area was complicated by the presence of shoring near the buildings. These buildings have been demolished so shoring is no longer required. Therefore, the confirmation sampling plan has been modified by adding samples adjacent to former Warehouse No. 2 and House No. 104 (at both 0-3 and 3-15 foot depth intervals). The samples will be analyzed for TPH and PAHs. See revised Figure 7 attached.
6. Section 5.2/Appendix A. The work plan proposes analyzing only selected confirmation samples for PAHs. Since the preliminary soil cleanup levels for the site are based on PAH concentrations all confirmation samples must be analyzed for PAHs. It has not been demonstrated that Total Petroleum Hydrocarbons (TPH) concentrations can be used as a surrogate analyses.

**Response:** As discussed above in the response to comment 5, the proposed confirmation sampling and analysis is based on the purpose of the excavation. While it appears that only selected samples are being analyzed for PAHs, all samples that are collected from the limit of an excavation for the purpose of addressing soil above PAH cleanup levels are being analyzed for PAHs. This occurs only in a few areas (portions of Areas 2, 12, 15, 16, 17, and 20) because most of the excavation limits are controlled by TPH concentrations (based on sampling for PAHs and TPH from the RI, not correlation between TPH and PAHs). To further verify cleanup of PAHs, however, we are also proposing to analyze selected samples from the limits of Areas 4, 6, 7 through 10, 13, 18, 19, and 21 (the limits of these excavations are well beyond that needed for cleanup of PAHs, as defined by sampling from the RI). Therefore, except as noted above in response to comment 5, no changes are proposed to the confirmation sampling plan.

7. Section 5.2/Appendix A. The work plan proposes analyzing the "clean overburden" stockpile samples for TPH. DEQ requests that 3 to 5 samples with the highest TPH concentrations be analyzed for PAHs.

**Response:** If TPH is detected in the samples from the clean overburden stockpile samples, up to three samples with higher relative concentrations of TPH will be analyzed for PAHs.

8. Section 6.2, Page 15. The Final Removal Action Report should include a revised residual risk assessment. The residual risk assessment should be revised based on the results of the confirmation sampling.

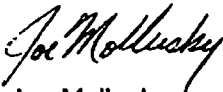
**Response:** The Final Removal Action Report will include a residual risk assessment that includes the confirmation sample data.

9. Figures 3, 4, and 5. It is DEQ's understanding that the extent of contamination at B-92 is based on an arbitrary diameter and that the final extent of excavation will be based on confirmation sampling.

**Response:** This is correct.

Please contact me at (503) 944-7533 with any questions. Your prompt attention is appreciated.

Sincerely,



Joe Mollusky  
Environmental Project Manager  
Properties and Development Services

Attachment: Figure 7 – Proposed Confirmation Sampling (Revised)

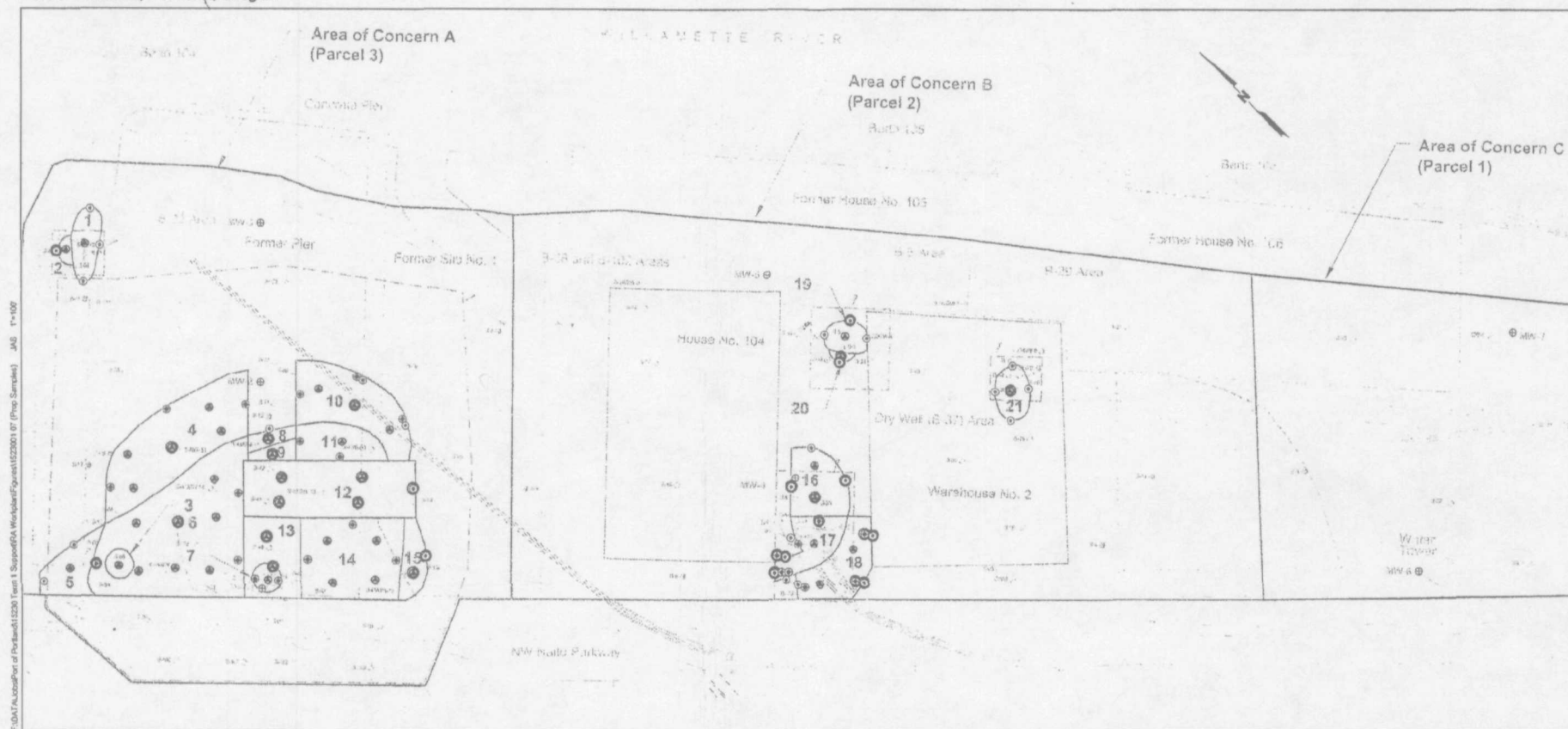
cc: Bill Bach, Port  
Jeff Bachrach, Ramis Crew Corrigan & Bachrach  
Herb Clough, Hart Crowser  
John Edwards, Anchor Environmental  
Nancy Murray, Port  
Tim Ralston, Ralston Investments

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bcc: David Ashton, Port  
Trey Harbert, Port  
Bob Teeter, Port  
~~James Hefens, Port~~

POPT1S601416

**Proposed Confirmation Sampling  
Terminal 1 South Removal Action  
Port of Portland, Portland, Oregon**



Note: Base map prepared from an AutoCAD file provided by Olson Engineering, 8/27/01.

**Legend:**

- Maui Foster and Alongi, Inc., Push Probe Boring Location and Number (March 1998)
- HAI Push Probe Boring Location and Number (2000)
- HAI Monitoring Well Location and Number (2001)
- 13 Final Excavation Removal Area and Number

- Proposed Confirmation Sample (0-3 Ft. Depth Range)
- Proposed Confirmation Sample (3-15 Ft. Depth Range)
- Proposed Confirmation Sample (Bottom Sample)
- Confirmation Sample Proposed for PAH Analysis

0 100 200  
Approximate Scale in Feet

**HARTCROWSER**  
15230-01 7/02  
Figure 7

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